SOUTHEAST COLORADO POWER ASSOCIATION

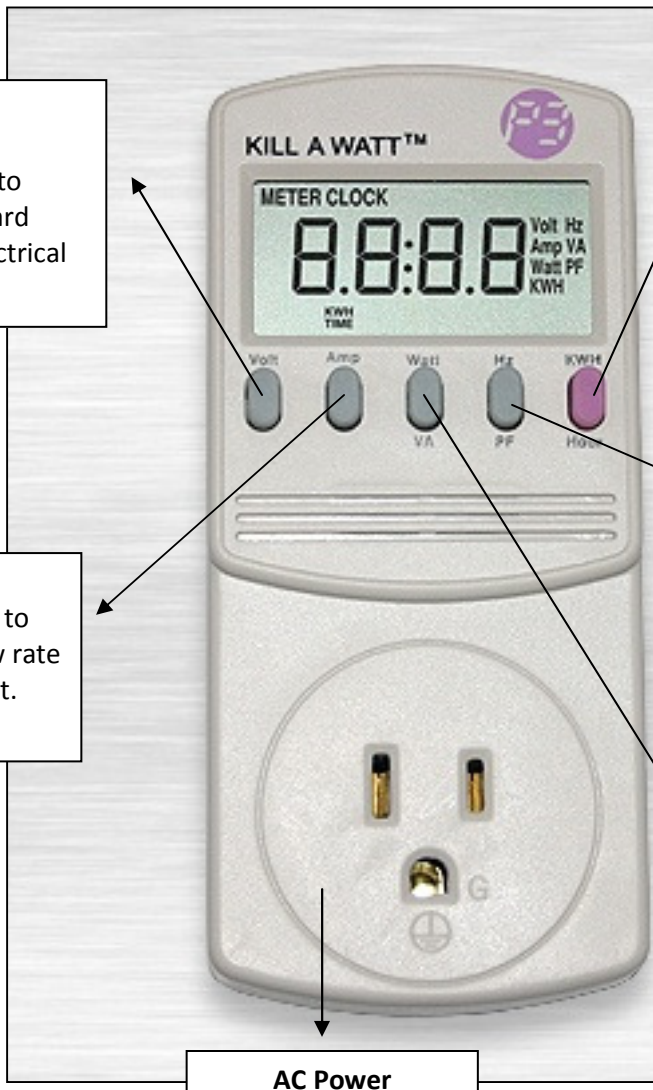
A Touchstone Energy® Cooperative

# KILL A WATT P3

## USER MANUAL

Southeast Colorado Power Association likes having well informed Members, so we have created this easy-to-use manual to help you better understand energy consumption in your household. You will learn how to identify appliances that are "Power Hogs" and what might be a "Vampire", slowly using energy when not in use. We hope this will help you decide what appliances need to be replaced and what might need to be unplugged as it sits idle. This in turn, should cut down on your power bill.

# KILL A WATT




**KWH "Money Button"** – Press this button once to see electricity used since monitoring started. Push button again to view time elapsed

**Volts-**
This should read something close to 120.0, the standard voltage in US electrical outlets.

**Hz/PF-**
60 hertz (cycles per second) alternating current in US electrical outlets (PF stands for Power Factor). The Volt, Amp, and Hz buttons are of lesser relevance to testing appliances for electrical efficiency.

**Amps-**
Press this button to measure the flow rate of electric current.

**Watt-**
Press this button to see how many watts the appliance is drawing at the moment.

**AC Power**

# Using the KILL A WATT P3

- **Plug the Kill A Watt into the wall, then plug the appliance into the socket on the front of the Kill A Watt. Next turn on the appliance or equipment.**

  - Suggestion: When monitoring a refrigerator or freezer, use an extension cord to position the "Kill A Watt" in a location convenient for reading.
  - Before testing the appliance find the "name plate" that tells you how many volts, watts, etc. the appliance should pull when in use.
  - For example if a toaster's "name plate" says it should be pulling 1800 watts, when its plugged in press the watt button on the "Kill A Watt", it should read 1800 watts or less. Another example: If your coffee maker is pulling 7.4 amps and the rating on the name plate was 7.5, this is good because it is reading correctly.
  - When you first use the "Kill A Watt" the time is displayed in minutes and hours (00:00), but after 99 hours have gone by, the display will switch to show only hours (up to 9999). Once the time limit is reached, it will start over again at zero.

- **Press the "Watt" button to read the power usage in watts.**

  - For some appliances the reading may vary depending on what the appliance is doing. For example, a printer will use more power when printing than when idle.
  - Try turning the appliance off, and see if the power usage goes to zero. Many appliances continue to use power even when turned "off" – this is referred to as a power hog, vampire or phantom, and it can add up over time since the power is being used 24/7. Appliances that use power when turned off can be unplugged or plugged into a power strip and the user can turn the power strip to "off".
  - An appliance that uses 20 watts even when turned off will use 176 kilowatt-hours of energy in a year – costing you about $18 annually.

- **Press the purple KWH/Hour "MONEY BUTTON" once for KWH usage and twice for time elapsed.**

  - The final button is the "MONEY BUTTON". Use this button to toggle back and forth between the number of hours over which the equipment was monitored, and the kilowatt hours of electricity used over that period. Record the numbers for both hours and kwh on the worksheet provided **before** disconnecting the Kill A Watt monitor from the wall.
  - The accumulated kwh data will be "lost" when the meter is disconnected because this is how the Kill A Watt resets itself.

- **Determining the cost of running appliances or equipment.**

  - SECPA recommends that you keep your appliance or equipment plugged in for at least 12 hours to gather and record sufficient data.
  - Now take the kwh use and the amount of hours recorded, and plug that data into the attached worksheet's formula columns.
  - The more items you test, the more you will see where you can save on your electric bill.

# KILL A WATT WORKSHEET

| Appliance/Equipment<br><br>(A) | Kilowatt-hours (KWH) of Electricity per Hour<br>(B) | Average number of Hours <u>on</u> each day<br>(C) | Cost per Day @ $0.12 per KWH<br>(D) | Number of Units in House<br>(E) | Total KWH Consumed per Year<br>(F) | Total Cost per Year<br>(G) |
|---|---|---|---|---|---|---|
| | (from Kill A Watt) | | B x C x $0.12 | | B x C x E x 365 | F x $0.12 |
| **example:** | | | | | | |
| Older computer w/ CRT monitor | 0.30 | 24 | $0.87 | 1 | 2628 | $315.36 |
| ENERGY STAR computer w/ LCD monitor | 0.10 | 24 | $0.29 | 1 | 876 | $105.12 |
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# Appliance Operating Cost Estimator

| | | | SECPA Cost per KWH | 0.1232 |
|---|---|---|---|---|
| **Appliance** | **Est. Wattage** | **Est. Hours/month** | **Est. KWH** | **Est. Monthly Cost** |
| Aquarium (Small) | 150 | 730 | 110 | $13.49 |
| Audio Entertainment System | 250 | 60 | 15 | $1.85 |
| Blender | 385 | 2 | 1 | $0.09 |
| Clock | 3 | 730 | 2 | $0.27 |
| Clothes Dryer | 6,000 | 17 | 102 | $12.57 |
| Coffee Maker | 1,200 | 30 | 36 | $4.44 |
| Compactor | 400 | 10 | 4 | $0.49 |
| Computer, monitor, printer | 365 | 75 | 27 | $3.37 |
| Convection Oven | 1,500 | 8 | 12 | $1.48 |
| Curling Iron | 1,500 | 5 | 8 | $0.92 |
| Dehumidifier (20 Pints, Summer) | 450 | 360 | 162 | $19.96 |
| Dishwasher - Drying | 1,200 | 25 | 30 | $3.70 |
| Dishwasher - Washing | 250 | 35 | 9 | $1.08 |
| Garbage Disposal | 420 | 60 | 25 | $3.10 |
| Electric Blanket | 175 | 180 | 32 | $3.88 |
| Electric Pet Fence | 15 | 730 | 11 | $1.35 |
| Fan - Attic Ventilation | 400 | 71 | 28 | $3.50 |
| Fan - Paddle | 80 | 150 | 12 | $1.48 |
| Fan - Window | 125 | 100 | 13 | $1.54 |
| Freezer - Frost Free | 440 | 334 | 147 | $18.11 |
| Fry Pan | 1,200 | 10 | 12 | $1.48 |
| Garage Door Opener | 350 | 3 | 1 | $0.13 |
| Hair Dryer - Portable | 1,000 | 10 | 10 | $1.23 |
| Heat Lamp | 250 | 5 | 1 | $0.15 |
| Heat Tape (30ft., Winter) | 180 | 720 | 130 | $15.97 |
| Heater (Auto Engine, Winter) | 1,000 | 180 | 180 | $22.18 |
| Heater (Portable) | 1,500 | 40 | 60 | $7.39 |
| Heating System (Warm Air Fan) | 312 | 288 | 90 | $11.07 |
| Humidifier (Winter) | 177 | 230 | 41 | $5.02 |
| Clothes Iron | 1,000 | 5 | 5 | $0.62 |
| Ice Maker | 200 | 333 | 67 | $8.21 |
| Jacuzzi - 2 Person | 1,500 | 93 | 140 | $17.19 |
| Lighting (Compact Fluorescent) | 18 | 100 | 2 | $0.22 |
| Lighting (Fluorescent) | 40 | 100 | 4 | $0.49 |
| Lighting (Incandescent) | 75 | 100 | 8 | $0.92 |
| Lighting (Outdoor Floor) | 120 | 90 | 11 | $1.33 |
| Microwave Oven | 1,500 | 11 | 17 | $2.03 |
| Mixer, Hand | 100 | 10 | 1 | $0.12 |
| Pool Pump (1.5 HP) | 2,000 | 250 | 500 | $61.60 |
| Power Tools (Circular Saw) | 1,800 | 1 | 2 | $0.22 |
| Radio | 71 | 101 | 7 | $0.88 |
| Range (Oven) | 2,660 | 20 | 53 | $6.55 |
| Range (Self Cleaning Cycle) | 2,500 | 3 | 8 | $0.92 |
| Refrigerator/Freezer | 250 | 333 | 83 | $10.26 |
| Satellite Dish and Receiver | 360 | 183 | 66 | $8.12 |
| Sump Pump (1/2 HP) | 500 | 20 | 10 | $1.23 |
| Television (Color, Solid State) | 200 | 183 | 37 | $4.51 |
| Toaster | 1,400 | 3 | 4 | $0.52 |
| Vacuum Cleaner | 1,500 | 6 | 9 | $1.11 |
| Waffle Iron | 1,200 | 4 | 5 | $0.59 |
| Washer | 512 | 17 | 9 | $1.07 |
| Waterbed Heater | 375 | 256 | 96 | $11.83 |
| Water Heater | 4,500 | 91 | 410 | $50.45 |
| Window Air Conditioner - 12,000 BTU | 1,500 | 200 | 300 | $36.96 |
| Window Air Conditioner - 6,000 BTU | 825 | 200 | 165 | $20.33 |